

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of controlling the flow rate of a fluid sample flowing through a microfluidic channel, the method comprising:

sheathing the fluid sample within a center region of a second fluid flowing through the microfluidic channel; and

flowing the fluid sample and the second fluid through the microfluidic channel in laminar flow,

wherein:

the second fluid completely surrounds, and is in contact with, the fluid sample at an interface between the second fluid and the fluid sample;

the flow rate of the fluid sample is constant across the center region; and

the flow rate of the fluid sample is substantially equal to the flow rate of the second fluid at the interface between the second fluid and the fluid sample.

2-32. (Cancelled)

33. (Previously Presented) The method of claim 1, wherein the fluid sample has an unknown or variable viscosity.

34. (Previously Presented) The method of claim 1, wherein the fluid sample comprises non-dissolved particles.